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ABSTRACT

The key to better outcome performance measures for community colleges is finding an effective and valid method of determining students' educational goals or reasons for attending the institution. In an attempt to find a solution to identifying student intent, San Juan College (SJC) postulated that student intent at any point in time can be most accurately measured by their behavior. The question undertaken in this study is: if we look at what courses a student is enrolled in and make certain assumptions about intent based on that enrollment, would we have a usable measure of student intent? In the preliminary explorations of this question conducted at SJC, the emerging answer is "Yes." Student intent data inferred from student enrollment does indeed appear to be a stable measure, with face validity, and quite usable as a qualifier for performance indicators. SJC identified four "enrollment segments" that would be likely educational goals for students attending the college: Career, Skill, Transfer, and Lifelong Learner. The tables presented in this paper show that reporting performance indicator data by enrollment segment provides community colleges an easy method to communicate performance data that are appropriate for student intent and the multiple missions of the institution. (VWC)

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A New Approach to Including Student Intent Information in Performance Measures

by Dr. Nelle Moore

A paper presented at the Rocky Mountain Association for Institutional Research annual conference, Las Vegas, Nevada, October 1999

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A New Approach to Including Student Intent Information in Performance Measures

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Introduction

Community Colleges, with their multifaceted missions, face a dilemma when reporting data to state agencies for performance measures. Usually these data show community colleges in a very poor light because the data do not take into account all of the different reasons that students have for attending the college. Performance indicators such as graduation rate, persistence, and transfer rate, are appropriate for only some of our students and misrepresent the full impact of the college. On the other hand, self-reported student intent data have been so notoriously unreliable as to leave no avenue for institutions to make their case. Institutions are left in the awkward position of defending their poor performance measures without data to substantiate their claims of serving a mixture of educational purposes.

The key to better performance measures for community colleges is finding an effective and valid method of determining students educational goals or reasons for attending the institution. Asking the student for their educational goal will always be fraught with error, or subject to incomplete data and changes over time. In an attempt to find a solution to identifying student intent, San Juan College postulated that student intent at any point in time can be most accurately measured by their behavior. The question undertaken in this study is: if we look at what courses a student is enrolled in and make certain assumptions about intent based on that enrollment, would we have a usable measure of student intent? In the preliminary explorations of this question conducted at SJC, the emerging answer is "Yes." Student intent data inferred from student enrollment does indeed appear to be a stable measure, with face validity, and quite usable as a qualifier for performance indicators.

Context for the Study

For the last two years, the New Mexico Association of Community Colleges, headed by Dr. Frank Renz, has been working on developing performance indicators for the two-year colleges in anticipation of state legislation. The NMACC wanted to take a proactive stance in developing appropriate measures for two-year colleges rather than waiting for the state to dictate

measures that would most certainly be based on a four-year model. The 1999 legislative session brought the predicted legislation in a bill called "Accountability in Government."[1] While not prescriptive, the bill does call for the identification of performance indicators in higher education leading to performance based funding by the year 2004. The bill does not specify what portion of funding will be based on performance indicators and leaves it up to each institution to identify its "programs" and indicators. However, it also gives oversight authority to the Legislative Finance Committee and the Governor's Budget Committee rather than to the Commission on Higher Education.

The NMACC began its efforts two years ago by using the AACC Core Indicators of Effectiveness[2] book as a framework. The NMACC identified 13 indicators to work on initially relating just to instructional and fiscal effectiveness and has not yet addressed service to the community. Working with the nine independent two-year colleges and the ten two-year branch campuses in the state, NMACC asked each institution to select one or more of the indicators to develop and pilot test. San Juan College selected persistence rates and transfer rates to develop and pilot test appropriate measures for the group. This report is the outcome of that effort.

Method

The first step taken by SJC was to identify four "enrollment segments" that would be likely educational goals for students attending SJC, given what we knew about our student body: Career, Skill, Transfer, and Lifelong Learner. It should be mentioned that different colleges most likely have different meaningful segments and certainly will have a different percentage of enrollment in each segment than that found at SJC. The enrollment segments and definitions should be tailored to match the program mix of your institution. One community college in New Mexico provides developmental education courses for all underprepared students at the university across the street. They have a significant enrollment of developmental-only students and therefore they defined an enrollment segment to fit this category.

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[1]House Bill 37, as amended, The Legislature of the State of New Mexico, 44th Legislature, 1st Session, Laws 1999, Chapter 5.

[2]American Association of Community Colleges, *Community Colleges: Core Indicators of Effectiveness*, AACC Communications Services, Washington, D.C., 1994.

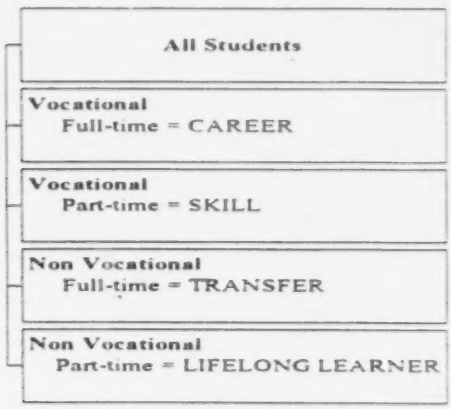
Our thinking at SJC evolved this way: let us first identify the enrollment segment that we can identify with the highest level of confidence and then move out from there. At SJC we have a few programs with highly selective admissions criteria. Courses in these programs are open only to majors who have been admitted into those programs, for example nursing and airplane pilot training. We can say with great confidence that anyone taking a course in these programs "intends" to receive a degree in these fields. Expanding from that base, we said that anyone enrolling in vocational fields on a full-time basis most probably intends to receive a degree in those fields. We call this enrollment segment "Career." Furthermore, anyone enrolled in courses in vocational fields on a part-time basis may be presumed to be upgrading their job skills. We call this segment "Skill." (Refer to the flow chart on the next page for a visual representation of this process.)

The Career segment can be postulated with fairly strong confidence. The Skill segment, however, is less certain. There will certainly be students who intend to get a degree in a vocational field but who do not enroll full-time. Let us remember, however, the purpose of this exercise. If we want to be able to report performance indicators with greater accuracy and to be held accountable as institutions (in performance funding environments) for those measures that are most accurate, we want to limit the students in the denominator to those that are most certain to be in that category. We know that full-time students have a higher chance of graduating from the institution than part-time students. That is not to say that part-time students NEVER graduate, but only that if you were to be held accountable for student graduation rates, you would want to be accountable for those students who are the most serious, committed to a program, and likely to have graduation as a goal than be accountable for those students who are sampling your course offerings for their own varied purposes. The point is not to include every student who may either now or some time in the future decide they might get a degree. The point of this exercise is to REMOVE from the denominator those students whose intent to graduate is marginal.

Having now identified the Career and Skill categories in a hierarchical fashion, we now assign students who are not enrolled in any vocational course and who are enrolled full-time to the "Transfer" segment. The remaining non-vocational students enrolled part-time are assigned to the "Lifelong Learner" segment. Again, is this an accurate assignment in every case? No!

Nursing students do transfer on occasion. Students taking general education courses part-time, do transfer on occasion. However, in the majority of cases, it is likely that these categorizations will capture the general pattern of student intent at SJC and provide more appropriate denominators for determining graduation and transfer rates. This segmentation also allows institutions the opportunity to develop appropriate performance indicators for the body of casual students that benefit from our services rather than confounding our performance indicators by analyzing students as if they are one homogeneous whole. Presenting performance data in terms of these (or your) enrollment segments properly acknowledges the multiple missions - and outcomes - that our institutions achieve.

Hierarchical Identification of Enrollment Segments



Validation

Stability of Enrollment Segments

Once the enrollment segments were defined, these definitions were applied to past data to see how well they described the enrollment at SJC (Table 1). The first advantage of this approach became apparent immediately. Because the segments are identified for each semester, they can be applied at any point in time or for a cohort, giving a great deal of flexibility depending on the type of indicator that is being developed. We also found that the percent enrollment in each segment remained remarkably stable over time. For the first time we saw in numeric terms the mix of students that we serve and found a few surprises that have program and marketing implications as well as usefulness for performance indicators

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Table 1

Enrollment Segments										
	FALL 94		FALL 95		FALL 96		FALL 97		FALL 98	
	#	%	#	%	#	%	#	%	#	%
Career	891	18%	971	19%	1,028	20%	1,098	20%	1,233	22%
Skill	865	17%	829	16%	765	15%	798	14%	741	13%
Transfer	913	18%	964	19%	914	18%	1,059	19%	1,135	20%
Lifelong Learner	2,276	46%	2,283	45%	2,407	47%	2,530	46%	2,424	44%
Total	4,945		5,047		5,114		5,485		5,533	

Telephone Survey of the "Skill" Segment

Since identifying these four segments, SJC has conducted a telephone survey of students that were identified as Skill students in order to determine how well the assumptions we made about this segment described the educational intent of the students. The interviewer first reminded the students what courses they had recently taken at the college and asked them what their purpose was in taking these courses. Fifty-nine percent (59%) of the respondents indicated that their purpose was to improve their job skills, which is exactly the purpose that we had ascribed to them. Twenty-six percent (26%) of the respondents indicated they took the course(s) for personal interest, which crosses into the "Lifelong Learner" segment. Computer courses and welding might be examples of courses that could cross over into either segment. Even though this method was unable to differentiate between the Skill and Lifelong Learner segments, these students were appropriately removed from the Career segment. In terms of outcomes, the Skill and Lifelong Learning segment are more like each other than either segment is like the Career segment. Therefore, 85% of the respondents were appropriately removed from the Career segment. Only 13% of the respondents indicated that they intended to get a degree.

The findings from the telephone survey show that, while our assumptions are not perfect, the Skill category was successful in removing a large percentage of students from the Career segment who are not intending to complete a degree. The survey information was an encouraging

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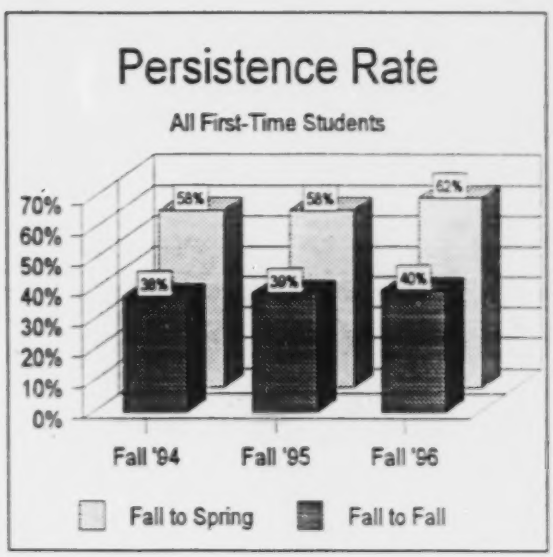
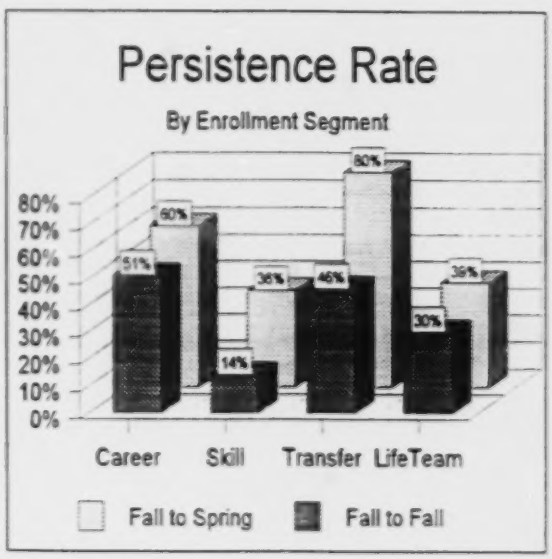
confirmation of our assumptions about the Skill segment and also led to a further level of refinement in the assignment of courses to segment categories.

Persistence Rates

Our next step was to use the enrollment segments to report persistence rates. The two charts presented below indicate face validity of the segments and begin to show the benefit of their application. Instead of reporting an overall fall-to-spring persistence rate of 62% for all first-time students, and 40% fall-to-fall rate, San Juan College can report that 80% of its transfer students persisted fall-to-spring and 46% persisted fall-to-fall while 69% of its career students persisted fall-to-spring and 51% persisted fall-to-fall. This is a significant improvement in communication of mission and outcomes.





Transfer Rates

The next application of enrollment segments was to transfer rates. Transfer rates in themselves present a difficult dilemma for institutions that do not have state level reporting or where, as in New Mexico, questions about FERPA have prevented the state agency from reporting transfer data to institutions. Also, for institutions near a state border, large proportions of transfers may cross state lines, making student tracking difficult. Furthermore, in keeping with

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the multiple missions of community colleges, especially in rural areas, community colleges make an important contribution to the education level of the citizens even if the students do not eventually transfer.

For these reasons, SJC explored the development of a "transfer ready" measure as an addition to, if not a substitute for, transfer rate. This approach is not completely unreasonable if you notice that reports of salaries by level of educational attainment usually include a "some college" category that performs better than the "HS Grad" category. In a recent article, Clifford Adelman says that

> "...those who have attended community colleges in non-incidental ways, have 'separated' from the system in a satisfactory manner if they have accomplished one of four ends: 1) transferred to a four-year college and received a bachelor's degree; 2) earned a terminal associate's degree; 3) earned a certificate indicating a coherent course of study that is nonetheless not a full degree program; or 4) taken a sufficient amount of course work that can be described as a partial major or complete lower-division general education program." (Adelman, C. 1998)[3]

Adelman further states that students achieving less than a degree or transfer have still "derived something from the community college experience that anyone - including employers - can describe." The "transfer ready" approach places the collection of data within the means of two-year institutions without having to gain the cooperation of myriad four-year institutions and state agencies - a distinct advantage. We have not yet tested our logic on the New Mexico legislators to see if they understand and accept it, but it is important at least to try to measure our mission rather than let inappropriate performance measures stand unchallenged.

The concept of "transfer ready" was explored by identifying a cohort of new students by enrollment segment and counting the general education core credit hours earned over a three year period. (New Mexico higher education institutions have agreed upon a core of 35 credit hours in general education courses that are guaranteed to be accepted toward a degree from transfer institutions.) The results, presented in Table 2, again confirm the face validity of the enrollment

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[3]Adelman, C., " More than 13 Ways of Looking at Degree Attainment," *National Crosstalk Fall 1998*, National Center for Public Policy and Higher Education, p 11

segments and show the usefulness of reporting performance indicators using these segments. Instead of reporting that only 20% of the cohort achieved 18 or more general education core credits within three years, we can report that 39% of the transfer students achieved 18 or more general education core credits within three years and an additional 54% achieved between 1 and 17 transferable general education credits.

Table 2

Transfer Ready *1995 Cohort*					
General Education Credits	**All N=723**	**Career N=185 (26%)**	**Skill N=87 (12%)**	**Transfer N=283 (39%)**	**Lifelong Learner N=168 (23%)**
0	31%	27%	78%	7%	51%
1-17	49%	62%	20%	54%	41%
18+	20%	11%	2%	39%	8%

Summary

The tables presented in this paper show that reporting performance indicator data by enrollment segment provides community colleges an easy method to communicate performance data that are appropriate for student intent and the multiple missions of the institution. This conceptual base can be built upon to expand the kinds of performance indicators reported to stakeholders. Performance indicators should be developed further to cover each aspect of the institutional mission. By developing accountability in each of our segments, community colleges can regain credibility and achieve recognition for the wide range of services that we provide. By applying enrollment segments as a measure of student intent, where appropriate, New Mexico community colleges will be able to present a matrix of indicators that more fully describes the impact that we have on our students and communities.